

The Availability of Instructional Media for Teaching Mentally Retarded Students in Nyanza Region, Kenya

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Abstract

Learners with mental retardation pose a unique problem to the education system, one not presented by any other exceptionality. In view of the challenges and limitations of these learners, modification of both social and educational environment is fundamental in-order to attain effective schooling for them. One of the best proven medium of teaching these special learners is the use of various instructional resources. The success or failure of learners with mental retardation is directly linked to the adequacy of these resources. This study thus aimed to establish the availability of instructional resources in special schools in the Nyanza region of Kenya. Simple random sampling was used to select a sample of 28 respondents (teachers and principals) for the study. Data was collected from the respondent using three instruments: the questionnaire for teachers, observation checklist and interview guide. The data collected were analyzed both quantitatively and qualitatively by the use of both descriptive and inferential statistics. According to the results, 43.6% of the respondents indicated that the listed visual resources were not available. 26.9% of the respondents indicated weighing scales and communication board were inadequate while 73.1% expressed the opinion that they were not available. Charts and picture boards were indicated by 65.4% as inadequate while substitution table was highly unavailable according to 88.5% of the respondents. Only 17.3% of the respondents said that the graphic materials were adequate while 34.1% indicated that they were not available. 91.2% indicate that the Audio-visual materials were not available while 8.8% indicated they were available but inadequate. The findings thus demonstrate that almost all basic instructional resources were either inadequate or not available in the special schools. The author recommends that there should be collaborative effort between the government and the schools in helping provide funds for the purchase of sufficient and up-to-date instructional resources for these special schools.

Keywords: Instructional resources, Special schools, Mentally retarded

INTRODUCTION

Learners with mental retardation pose a unique problem to the education system, one not presented by any other exceptionality (Wehmeyer *et al.*, 2001). While the visually impaired, hearing impaired or learning disabled require modification in the way they are taught, the mentally retarded require educators to decide what they should be taught and how. Mental retardation is not a unilateral concept; persons who are mentally retarded can exhibit quite different kinds of behavior and adaptivity (Edyburn, 2000). Three criteria that must be met before a person should be classified as mentally retarded include sub average intellectual ability, problems in adaptive functioning and these should be manifested before age eighteen (Wehmeyer, 2003). In view of the cited criteria, the various limitations these learners have can only be addressed through modification of both social and educational environment the key being the education channels.

For effective teaching of mentally retarded persons to occur, there must be more than one forms of clear communication. This interchange of information can only be possible through a channel or medium. A medium in this case refers to a channels through which information, messages, ideas or knowledge are conveyed from one person to another or one place to another (Zins, 2007).

One of the best proven medium of teaching in schools is the instructional media. Instructional media comprises of all the materials and physical means which an instructor can use to implement instructions and facilitate students' achievement of instructional objectives (Reigeluth, 2013). These include conventional materials such as chalkboards, whiteboards, handouts, charts, slides, overheads, real objects, and videotape or film, as well contemporary materials and methods such as computers, DVDs, CD, internet, projectors and interactive video conferencing (Rodgers & Withrow-Thorton, 2005). When students are not aided with instructional media of different kinds in teaching and learning, they are usually faced with insurmountable difficulties in learning. Aina (2013) opinioned that the use of instructional media would make discovered facts glued firmly to the memory of students. Likoko *et al.* (2013) also added that a well-planned and imaginative use of visual aids in lessons should do much to banish apathy, supplement inadequacy of books as well as arouse students' interest by giving them something practical to see and do, and at the same time helping to train them to think things out themselves.

The success or failure of learners with mental retardation in school, like all other learners, is directly linked to the adequacy and utilization of resources (Cross & Donovan, 2002). This means that inadequacy of instructional resources in a learning institution for mentally retarded hampers learner's interest and performance (Vaughn & Fuchs, 2003). Additionally, lack of instructional resources in the classroom has a cumulative

negative impact on learners with mental retardation's ability to fit and function effectively in the community (Skiba *et al.*, 2008).

Despite the fact that Special Schools in Kenya were established immediately after the 2nd World War, not much has been done to improve the standard of education for learners with special needs. Lack of instructional resources and their ineffective use in teaching learners with mental retardation could probably be one area that has contributed to low enrolment of these learners in schools. This study thus aimed to establish the availability of instructional resources in special schools in the Nyanza region of Kenya. The study was biased on special schools since most of the studies carried on instructional resources in Kenya have focused only on regular classroom teaching (Likoko, Mutsotso&Nasongo, 2013; Omwono, 2012; Benjamin &Orodho, 2014).

MATERIALS AND METHODS

The study was carried out in Nyanza region in Western part of Kenya. The main reason for carrying out the study in this locale was that a study of this nature had never been done in the province.

The target population of this study comprised of four (4) special schools for learners with mental retardation, fifty (50) teachers and 300 learners. These schools were Lutheran Special School in Kisumu town, Kisii Special School in Kisii Central district as well as Maranda Special School in Bondo district and Equator Round Table Special School in Siaya district. The researcher used all the schools in this study.

Simple random sampling was used to select six teachers from each of the four schools used for this study. A total of 28 teachers including head teachers from the four schools participated in the study. Learners were not sampled. This was because of their mental challenges that would make it difficult to gather useful and reliable information from them.

In this study, data was collected from the respondent using three instruments: the questionnaire for teachers, observation checklist and interview guide. The three instruments were used to supplement one another in order to bridge any gap that could be left using one instrument.

The researcher personally administered the questionnaire in order to improve on the return rate and control for group work. The instructional resources checklist was used to establish whether the instructional resources were available and whether or not they were adequate. The interview guide consisted of unstructured questions. This instrument was used to probe the responses given by the respondents in the questionnaire.

The data collected were analyzed both quantitatively and qualitatively by use of both descriptive and inferential statistics. Statistical package for Social Sciences (SPSS) was used to facilitate analysis of the collected data.

RESULTS AND DISCUSSION

Instructional Resources used in Teaching

The study tried to elucidate the types of instructional resources which were available for learners with mental retardation. An item from the questionnaire sought to find out from teachers the most common instructional resources they used to teach their classes. The information was obtained from 28 teachers out of whom four (4) were head teachers. The response patterns of the items are presented on table 3.

Table 1: Common Instructional Resources used by Teachers (n = 28)

Resources	N	%
Number cards	9	12.2
Simple Abacus	3	4.1
Pegboards	4	5.4
Charts	7	9.5
Real objects	3	4.1
Plasticine	3	4.1
Shape board	2	2.7
Stacking toys	3	4.1
Alphabet puzzle	1	1.4
Reading tress	2	2.7
Picture books	1	1.4
Flash cards	10	13.5
Jembes (hoes)	3	4.1
Needles	4	5.4
Place value tray	3	4.1
Tape measure	2	2.7
Clock face	5	6.7
Hammer	2	6.7
Puppets	3	2.7
Tooth brush	2	4.1
Jack plane	2	2.7
TOTAL	74	100.00

Note: Respondents included more than one resource.

Information in this table reveals that majority 13.5% of the teachers used flash cards while alphabet puzzle and picture book were least used at 1.4%. Number cards and charts constituted a relatively high percentage of users at 12.2% and 9.5% respectively.

Community Instructional Resources used in Teaching

The study also sought to establish the community resources teachers used to teach learners with mental retardation. The table 4 shows the findings.

Table 4: Community Resources utilized in the Instruction of learners (n= 26)

Community resources	n	%
Agricultural Society of Kenya (ASK)	3	10.32
Guest speaker	12	34.5
Shopping mall	7	24.1
Community farms	5	17.2
Public function/cultural events	2	6.9
Total	29	100.00

Note: Respondents indicated more than one response.

According to Table 4, the highest number (34.5%) of respondents indicated they used guest speaker as community resource in the instruction of learners. Public functions /cultural events had the lowest percentage (6.9%) of the respondent indicating their use. The other community resources mentioned by the respondents included Shopping mall, community farms and ASK shows.

Adequacy of the Instructional Resources

The study tried to establish the adequacy of instructional resource for learners with Mental Retardation. A list of instructional resources that are commonly used to teach learners with mental retardation was prepared by the researcher and the adequacy/ inadequacy established by carrying out a spot check in the school and through a checklist given to classroom teachers to indicate the resources they considered available, adequate or inadequate and those that were not available.

The study sought to establish the opinion of teachers in regard to adequacy and/ or inadequacy of instructional resources – visual materials. The results are shown in table 5.

Table 5: Adequacy of Visual Instructional Materials

Visual Materials	Available				Not Available	
	Adequate		Inadequate			
	n	%	n	%	n	%
Shape Board	07	26.8	16	61.6	03	11.5
Flannel Board	04	5.4	08	30.8	14	53.8
Plasticine	11	42.3	09	34.6	06	23.1
Peg Board	02	7.7	17	65.4	07	26.9
Simple Abacus	07	26.9	13	50.0	06	23.1
Communication Board	-	-	07	26.9	19	73.1
Corner Shop	10	38.5	02	7.7	14	53.8
Beam Balance	04	15.4	05	19.2	17	65.4
Clock Face	07	26.8	12	46.2	07	26.9
Coloured Objects	07	26.8	14	53.8	05	19.2
Puppets	02	7.7	05	19.2	19	73.1
Weighing Scale	-	-	07	26.9	19	73.1
Total		234.3		442.3		523
Mean		19.5		36.9		43.6

According to Table 5 an average of (43.6%) of the respondents indicated that the listed visual resources were not available. A comparatively high percentage of (26.9%) of the respondents indicated weighing scales and communication board were inadequate while the highest percentage of (73.1%) expressed the opinion that they were not available. The findings demonstrate that almost basic instructional resources were either inadequate or not available in Special Schools for the mentally retarded in the province.

Table 6: Opinions of the respondents as regards adequacy and /or inadequacy of Graphic Materials (n = 28).

Graphic Materials	Available				Not Available	
	Adequate		Inadequate			
	n	%	n	%	n	%
Charts	7	26.9	17	65.4	2	7.7
Picture Boards	415.4		7	26.9	15	57.7
Picture cut outs	415.4		16	61.5	6	23.1
Number cards	623.1		14	53.8	6	23.1
Letter cards	519.2		8	30.8	7	26.9
Tracing paper	726.9		13	50.0	11	42.3
Name cards	519.2		12	46.1	8	30.8
Puzzles	415.4		14	53.8	10	38.5
Machine card	415.4		16	61.5	8	30.8
Cutting from mag	311.5		16	61.5	7	26.9
Sub table	-	-	3	11.5	23	88.5
Word Bank	726.9		14	53.8	5	19.2
Picture Book	5	19.2	14	53.8	7	26.9
Reading board	3 11.5		14	53.8	9	34.6
Stacking Toys	3	11.5	14	53.8	11	42.3
Cartoon books	5	19.2	14	53.8	7	26.9
Total		276.7		776.4		546.2
Mean		17.3		48.5		34.1

According to table 6, charts and picture boards were indicated by the majority of teachers (65.4%) as inadequate while substitution table was not available according to (88.5%) of the respondents. On average only a small percentage of (17.3%) of the respondents said that the graphic materials were available and adequate, while (34.1%) were of the view that they were not available.

Table 7 shows how teachers responded to the question on adequacy and /or inadequacy of equipment and facilitates for learners with mental retardation. Responses of the teachers are shown in the table below.

Table 7: Opinions of the respondents regarding adequacy and /or inadequacy of equipment/ facilities

Equipment /facilities	Available Adequate		Inadequate		Not Available	
	n	%	n	%	n	%
Ironing Surfaces	4	15.4	16	61.5	6	23.1
Cutting out tables	3	11.5	13	50	10	38.5
Dress making Pins	4	15.4	14	53.8	8	30.8
Tracing wires	3	11.5	13	50	10	38.5
Mixing bowl	-	3.8	12	46.1	13	50
Chopping Board	4	15.4	9	34.6	13	50
Mincer	-	3.8	6	23.1	18	69.2
Jack plane	3	11.5	16	61.5	7	26.9
Cramp	3	11.5	15	57.7	8	30.8
Hammer	6	23.1	13	50	5	19.2
Try Square	3	11.5	16	61.5	7	26.9
Pattas	2	7.7	16	61.5	7	26.9
Pincer	2	7.7	17	65.4	7	26.9
Bench vice	1	3.8	15	57.7	11	42.8
Tape measure	6	23.1	12	46.2	8	30.8
Total		176.7		780.6		530.8
Mean		11.8		52		35.4

According to the respondents (52.0%), the highest average indicated that the resources were inadequate while a small percentage (11.8%) was of the opinion that they were available and adequate. Curiously (11.8%) of the respondents showed that they were available and adequate. The respondents that said the resources were adequate could be indicating conflicting messages about their opinion. However they were few.

An item in the questionnaire sought to find out from teachers their opinion on the adequacy and /or inadequacy of audio-visual resources. The response patterns of this item are presented in table 4.26 below.

Table 8: Opinions of respondents regarding adequacy/inadequacy of Audio-Visual materials (n=26)

Audio -Visual Materials	Available		Inadequate		Not Available	
	n	%	n	%	n	%
Television (TV)	-		9	34.6	17	65.4
Tape recorder	-		-	-	26	100
Computer	-		-	-	26	100
Films Projectors	-		-	-	26	100
Radio	-		7	26.9	19	73.1
Slide Projector	-		-	-	26	100
Overhead Projector	-		-	-	26	100
Total				61.5		638.5
Mean				8.8		91.2

The highest average of (91.2%) considered the Audio-visual materials as not available while (8.8%) indicated they were available but inadequate. According to the respondents film projectors, slide projectors and overhead projectors and computers were not available at all in the schools.

One respondent during the interview commented, *“The government needs to increase funding for schools serving learners with Special Needs in Education. Most of them learn by doing and therefore should be given opportunity to handle and manipulate objects hence increasing their understanding.”*

CONCLUSION

Graphic materials were the most commonly used resources by teachers in the instruction of learners. The dominant use of this type of material implies that teachers only went for what they believed was readily available and not much thought was given to the use of varieties of resources. Majority of teachers according to the study indicated that visual materials were either inadequate or not available in the school. In addition, equipment and facilities as a category of instructional resources was similarly established by the study to be either inadequate or unavailable. The study also established that audio-visual materials were totally unavailable in the schools

sampled. These actualities point to the fact that the major problem facing instruction of learners with mental retardation in the province is inadequacy and unavailability of teaching and learning resources.

RECOMMENDATIONS

From the findings of this study, the following recommendations are made;

- i) The ministry of education should initiate in-service courses geared towards updating teacher's skills in the utilization of all sorts of instructional resources especially audio-visual materials.
- ii) Lack of finances is a major setback in the acquisition of educational resources particularly Audio-visual/high technology resources thus there should be collaborative effort between the government and the schools in helping provide funds for the purchase of high technology resources for these schools.
- iii) Social cultural bias/negative attitudes which impede free access to community resources by learners with mental retardation should be addressed through awareness raising campaigns using print and electronic media as well as in other social gatherings.
- iv) Well-equipped resource centers should be established in every county in the country to serve as teacher's resource centers. Teachers for learners with mental retardation and other categories of special needs could use such centers to update their skills in the appropriate application and use of instructional resources.

REFERENCES

- Aina, K. J. (2013). Instructional Materials and Improvisation in Physics Class: Implications for Teaching and Learning. *Computer*, 2(20), 8.
- Benjamin, B. I., & Orodho, J. A. (2014). Teaching and Learning Resource Availability and Teachers' Effective Classroom Management and Content Delivery in Secondary Schools in Huye District, Rwanda. *Journal of Education and Practice*, 5(9), 111-122.
- Cross, C. T., & Donovan, M. S. (Eds.). (2002). *Minority students in special and gifted education*. National Academies Press.
- Edyburn, D. L. (2000). Assistive technology and mild disabilities. *Mental retardation*, 61(2), 10-6.
- Likoko, S., Mutsotso, S., & Nasongo, J. (2013). The Adequacy of Instructional Materials and Physical Facilities and their Effects on Quality of Teacher Preparation in Emerging Private Primary Teacher Training Colleges in Bungoma County, Kenya. *International Journal of Science and Research (IJSR)*, India Online ISSN: 2319-5706, 2(1).
- Likoko, S., Mutsotso, S., & Nasongo, J. (2013). The Adequacy of Instructional Materials and Physical Facilities and their Effects on Quality of Teacher Preparation in Emerging Private Primary Teacher Training Colleges in Bungoma County, Kenya. *International Journal of Science and Research (IJSR)*, India Online ISSN: 2319-5706, 2(1).
- Omwono, J. O. (2012). *A study of the availability and use of instructional media in the teaching and learning of primary mathematics in Kuja educational division, South Nyanza, Kenya* (Doctoral dissertation).
- Reigeluth, C. M. (Ed.). (2013). *Instructional design theories and models: An overview of their current status*. Routledge.
- Rodgers, D. L., & Withrow-Thorton, B. J. (2005). The Effect of Instructional Media on Learner Motivation. *International Journal of Instructional Media*, 32(4), 333.
- Skiba, R. J., Simmons, A. B., Ritter, S., Gibb, A. C., Rausch, M. K., Cuadrado, J., & Chung, C. G. (2008). Achieving equity in special education: History, status, and current challenges. *Exceptional Children*, 74(3), 264-288.
- Vaughn, S., & Fuchs, L. S. (2003). Redefining learning disabilities as inadequate response to instruction: The promise and potential problems. *Learning disabilities research & practice*, 18(3), 137-146.
- Wehmeyer, M. L. (2003). Defining mental retardation and ensuring access to the general curriculum. *Education and training in developmental disabilities*, 271-282.
- Wehmeyer, M. L., Lattin, D., & Agran, M. (2001). Achieving access to the general curriculum for students with mental retardation: A curriculum decision-making model. *Education and Training in Mental Retardation and Developmental Disabilities*, 327-342.